

Remarks

In the initial Office Action of February 25, 2004, the Examiner rejected all of the claims as originally presented for examination based wholly on U.S. Patent No. 4,722,475 to Newell ("the Newell patent"). In response, Applicant filed an Amendment on July 26, 2004, which, on a claim by claim basis, specifically outlined the differences between the Newell patent and the claimed invention. In response to this Amendment and the arguments presented therein, the Examiner, in the present Office Action of August 26, 2004, simply states that "Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection." The new grounds of rejection, however, that the Examiner has used in rejecting claims 1-17 in the present Office Action, are all based on a combination of the Newell patent with another reference under §103(a), with the Newell patent being the base reference in each case.

It is again respectfully submitted that the Newell patent is directed to a fundamentally different concept than the present invention and operates in a fundamentally different way. Accordingly, the Newell patent cannot function as the base reference upon which all of the claims are presently rejected. The Examiner is respectfully asked to reconsider the rejections in the light of the remarks below.

Before getting to the substantive differences between the teachings of the Newell patent and the present invention as claimed, Applicant respectfully submits that all of the rejections are improper as the Examiner has failed to make a prima facie case of obviousness, as required by statute and outlined in case law and the M.P.E.P.

In rejecting claims under 35 U.S.C. §103, the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of going forward with evidence or argument shift to the Applicant. To establish prima facie case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). In the present instance, the Examiner has failed to do so.

In rejecting claims 1-5 and 15-17 in paragraph 2 of the Office Action and claims 7-14 in paragraph 3 of the Office Action, the Examiner simply summarily states that “Newell, III et al discloses the claimed invention” That is it. That is the sum total of evidence and comments in the Office Action as to how the Newell patent discloses each of the limitations in claims 1-17. This simply does not meet the Examiner’s burden to present a prima facie case of obviousness. M.P.E.P. §2142 states that, “[t]he examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness.” Stated another way, if the Examiner fails to establish a prima facie case of obviousness, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Looking now at claim 1, the Examiner stated in paragraph 2 of the Office Action that “Newell, III et al discloses the claimed invention except for the duration of the duty cycle being less than two minutes.” Accordingly, that statement means that all of the limitations found

in claim 1, with the exception of the less than two minute duty cycle, are found in the Newell patent. Yet, the Examiner has not pointed to the teachings in the Newell patent of all of the remaining limitations in claim 1. For example, the Examiner has not pointed to the teaching in the Newell patent of sensing a condition in the space, or of selecting a duration, or of selecting a time period, or of applying conditioned air, or of stopping the application of conditioned air to the space during the part of each duty cycle that does not include said time period. Applicant is not required to guess at what parts of a reference the Examiner thinks discloses a particular limitation. Instead, the initial duty is on the Examiner to establish a prima facie case of obviousness by pointing out where in the prior art the claimed limitations are met. Applicant respectfully submits the Examiner has failed to do so and, therefore, the rejection of claim 1 under §103 is improper and should be withdrawn. At a minimum, the Examiner's response to the present Response should be non-final and should include a detailed explanation of how each of the limitations of claim 1, with the exception of the duration of the duty cycle, are taught by the Newell patent.

The rejection of claims 2-17 should be withdrawn for the same reasons. Claims 2-5, which depend from claim 1, each include additional limitations; yet, the Examiner has made no reference to these limitations or how they are taught by or found in the Newell patent. The same is true for claims 15-17. Also, a similar situation arises with respect to independent claim 7 and claims 8-14 that depend therefrom. The Examiner states in paragraph 3 of the Office Action that the Newell patent teaches the invention claimed in claim 7, but for the terminal units having dampers. The Examiner then states that U.S. Patent No. 5,076,346 teaches terminal units with dampers. The Examiner fails to point out how all the remaining limitations of claim 7, as well as all the additional limitations of dependant claims 8-14 are taught by the Newell patent.

Accordingly, Applicant submits that the rejection of claims 2-17 be withdraw as they are not properly supported and do not represent a prima facie case of obviousness. that are not found in the Newell patent. At a minimum, the Examiner's response to the present Response should be non-final and should include a detailed explanation of how each of the limitations of claims 2-17, with the exception of the damper limitation, are taught by the Newell patent.

In summary, an Examiner is required to provide objective evidence is support of an obviousness finding. It is fundamental to a finding of obviousness, that the rejection be based on evidence in the record. In re Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983). To support such a rejection, the Examiner must reveal evidence in the references showing the teaching relied on. *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008(Fed. Cir. 2001). This factual inquiry must be thorough. Id. Additionally, it must be based on objective evidence in the record, not unsupported statements or conclusions. *See Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000); C.R. Bard, Inc., v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998); In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999); and In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998). The showing must also be specific. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317(Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459(Fed. Cir. 1998) (the USPTO must identify specifically the principle, known to one of ordinary skill, that suggests the claimed invention). The Examiner has failed to provide the objective evidence required support of an obviousness finding.

Turning now to the substantive arguments, Applicant submits that it is improper to combine the Newell patent with the Papazian patent because there is no teaching or suggestion in the references to combine the references in the manner suggested by the Examiner and because Papazian is non-analogous art.

Claim 1 was previously amended to call for the duty cycle to be less than two minutes. This is clearly not taught in the Newell patent. In particular, the attention of the Examiner is directed to the specification at paragraph 62, wherein a duty cycle as long as two minutes is specified and it is stated that the duty cycle may be 60 seconds or less in most applications. Paragraph 64 of the specification contrasts this relatively short duty cycle with a conventional system in which duty cycle may be 5-10 minutes. The various advantages that are achieved by a relatively short duty cycle (less than two minutes as compared with a conventional duty cycle of 5-10 minutes) are set forth in paragraphs 68-69 of the specification.

In contrast to the two minute duty cycle set forth in amended claim 1, the Newell patent discloses a much longer duty cycle, set forth at the bottom of column 3 and the top of column 4 as 5 minutes, 10 minutes or even 30 minutes. This is certainly in line with duty cycles that are set forth in the specification of the present application as characterizing conventional systems, and it is submitted that the Newell system is in fact a conventional system in this regard.

Clearly, the Newell patent teaches a duty cycle which must be at least 5 minutes. By no means does this teach or suggest a two minute duty cycle such as that set forth in amended claim 1. In fact, this reference teaches away from such a short duty cycle as the one claimed in claim 1. As the Examiner is aware, a reference that teaches away from a modification is evidence of non-obviousness.

Further, the Newell patent expressly teaches that a shorter duty cycle is disadvantageous to the point of being impractical. In this regard, at column 4 in the paragraph beginning at line 22 of the Newell patent, it is pointed out that the hysteresis characteristic of the Newell system is important. A duty cycle as short as two minutes would result in the sensor signal being on throughout the entirety of the duty signal and would make the system essentially inoperable. It would certainly make the Newell system unable to stop the application of conditioned air to the space during part of each cycle, as one "on" signal would continue through the cycle and there would be no stopping of the application of conditioned air.

For all of these reasons, the two minute duty cycle set forth in amended claim 1 patentably distinguishes the invention from anything taught by Newell or anything that would be possible in any practical application of the Newell system. Further, there is no teaching in Newell or Papazian that would lead one of ordinary skill in the art to combine the references as suggested by the Examiner.

The Examiner has the burden to establish that any combination of prior art references is obvious to one of ordinary skill in the art and must provide the factual basis for such reasoning. In order to satisfy this burden, the Examiner must point to an objective teaching in the prior art that would lead someone to combine the relevant teachings of these references. See In re Fritch, 23 USPQ2d 1780 (Fed. Cir. 1992).

It is not enough that one skilled in the art could adapt the teaches of the prior art to come up with Applicant's invention. There must be a teaching or suggestion in the art that would motivate such a person to make the proposed combination. That is why the Federal Circuit recently stated that "[t]he proper test is whether there was a suggestion or motivation in one of the pieces of prior art that would have motivated one of ordinary skill in the art to

combine the references. Absent such suggestion, the combination would not be obvious.”

Monarch Knitting Machinery Corp. v. Sulzer Morat GmbH, 45 USPQ2d 1977 (Fed. Cir. 1998).

The Examiner has pointed to no “suggestion or motivation in one of the pieces of prior art that would have motivated one of ordinary skill in the art to combine the references” in the manner claimed by Applicant. Accordingly, the rejection is improper and should be withdrawn.

As discussed above, in order to combine prior art references, the Examiner must point to a suggestion or motivation in the prior art to combine the references in the manner suggested. Applicant submits that the Examiner has failed to do so. Further, in order to combine two references, the references must be from analogous art, as it has been held that the determining of obviousness under 35 U.S.C. §103 will not include nonanalogous art. In re Pagliaro, 210 USPQ 888 (CCPA 1981).

Papazian is not directed to delivering conditioned air to a space, as the method claimed in claim 1 is. Papazian, in contrast, is directed to an electrically operated gas valve for controlling the flow of natural gas to a combustion chamber to reduce gas consumption. Nowhere does Papazian suggest that the valve could be used to control the flow of conditioned air from a source for conditioned air to a space.

Claim 2 is a dependent claim which sets forth the limitation of the air being applied at a substantially constant velocity and volume rate of flow. Newell teaches directly to the contrary. The Newell patent expressly states at column 4 in the paragraph beginning at line 42 that the air conditioning system is a louvered ventilation system in which the ventilation is increased when actuated and a constant volume or constant velocity is impossible. Certainly, the fan system set forth in Newell as an alternative is subject to the same limitations and cannot achieve constantly velocity and volume rate of flow.

Claim 3 is another dependent claim setting forth the additional step of adjusting the duration of the time period when the conditioned air is applied during each duty cycle in response to temperature changes. The attention of the Examiner is also directed to independent claim 15 which sets forth the step of varying the duration of the "on" time period in response to changes in the condition that is sensed in the space. Both claims 3 and 15 are patentably distinct from what is taught by Newell.

In this regard, the duty cycle in the present invention remains fixed (unless it is intentionally changed by intervention) and only the "on" time of the system varies when a variation is sensed in the condition of the space (such as the temperature). In other words, the duration of the duty cycle does not change but only the duration of the "on" time during each duty cycle changes. The attention of the Examiner is directed to the appended diagram 1 which is a copy of the pertinent portions of Fig. 2 of the Newell patent drawings. Referring first to the diagram labeled "A1-Timer", the duty cycle is the off time plus the on time in a situation where only the timer is controlling the system. In this situation, there is clearly no variation in duration of the "on" time period, as it is constant. Referring next to the diagram marked "B2-Actuation", the duration of the first duty cycle is indicated at "duty cycle 1", and the duration of the second duty cycle is indicated at "duty cycle 2". There is clearly no change made in the duration of the "on" time period, as it is constant (24' and 26), the same duration as the "on" time period of the "A1-Timer" diagram. In fact, the first duty cycle has a shorter duration than the second duty cycle, so the duty cycles are not of a fixed duration as called for by claim 15.

With reference to the "C2-Actuation" diagram, there is again clearly no change made in the duration of the "on" time period, as it is constant as indicated at 38 and the same as in the first two diagrams.

In the final diagram identified as the “D2-Actuation” diagram, there is a variation in the “on” time of the system as indicated at 30. However, there is not a variation made in the “on” time period during a duty cycle having a fixed duration as called for by claim 15. Instead, duty cycle 1 containing the on block 30 is longer than the other duty cycles such as duty cycle 2. In other words, in duty cycles during which there is a variation made in the “on” time period, there is also a variation made in the duration of the duty cycle (the “off” time period remains constant, while the “on” time period is increased to increase the duration of the duty cycle). This is contrary to the fixed duration for the duty cycle that is called for by claim 15.

It is thus evident that the system taught by Newell is fundamentally different from which is set forth in claim 15. When there is an increased demand for conditioned air in the present invention, it is met solely by increasing the “on” time during a constant duration duty cycle. The demand is met in the Newell system by increasing the duty cycle duration and at the same time, also increasing the “on” time period. The Newell system thus functions in a manner contrary to what is set forth in claims 3 and 15 and cannot by any stretch of the imagination be considered to teach the fundamentally different conceptional approach that is taken by the present invention. The advantages of the constant duty cycle and variation of the “on” time period during the constant duration duty cycle are set forth throughout the present application and provide significant practical benefits that are absent from a system such as Newell’s.

For these reasons, dependent claim 3 is allowable on its own merits, and claim 15 is allowable for the same reasons.

Claim 4 is another dependent claim which Newell fails to meet, in that Newell teaches only a general air conditioning system. Claim 5 calls for staggering in the initiation of the different duty cycles in a multiple terminal system, and Newell completely fails to teach

anything remotely similar. Nowhere in the Newell disclosure or in Papazian is there any suggestion of providing multiple terminals and staggering initiation of their duty cycles. The advantages of staggering the duty cycles at the different terminals are set forth in the present specification in paragraph 66. Newell and Papazian completely fail to recognize such advantages, so it could hardly be considered obvious to modify Newell with Papazian to achieve advantages that are not even recognized.

Claim 7 is an independent claim that is submitted to be allowable for a variety of reasons, particularly the inclusion of a damper that is either fully open or fully closed. Newell nowhere teaches the use of a damper but in fact teaches directly to the contrary in that a louvered ventilation system is specified in column 4, line 45, as well as an alternative cooling apparatus involving “fans”, as indicated at column 4, line 49. The advantages resulting from the use of a damper in a system such as that of the present invention are set forth throughout the specification and cannot be achieved by a non-damper system such as that of Newell. For this reason alone, claim 7 is clearly allowable over Newell and any other known prior art.

In response to the previous argument with respect to claim 7, the Examiner simply performed a search for prior art reference that disclosed the use of dampers therewith and indicated that it would have been obvious to combine this newly found reference (Otsuka) with Newell “for the purpose of more precisely controlling the air flow into the space being conditioned.” However, it is insufficient to simply search the prior art for elements claimed in Applicant’s invention and state, in conclusory fashion, that it would have been obvious to modify the Newell device by adding the dampers of Otsuka as claimed by Applicant without pointing to such modification.

To establish a *prima facie* case of obviousness, “the examiner must provide a factual basis to support the obviousness conclusion.” Ex parte GPAC Inc., 29 USPQ2d 1401 (Bd. Pat. App. & Inter. 1993); *See also* In re Warner, 154 USPQ 173 (CCPA 1967); In re Lunsford, 148 USPQ 721 (CCPA 1966); and In re Freed, 165 USPQ 570 (CCPA 1970). “The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” In re Fritch, 23 USPQ2d 1780 (Fed. Cir. 1992). In other words, “[i]t is insufficient to establish obviousness that the separate elements of the invention existed in the prior art, absent some teaching or suggestion, in the prior art, to combine the elements.” Arkie Lures Inc. v. Gene Larew Tackle Inc., 43 USPQ2d 1294 (Fed. Cir. 1997). The Examiner “must show ‘some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references’” in the manner combined by Applicant’s invention without the benefit of Applicants’ disclosure. Tec Air, Inc. v. Denso Manufacturing Michigan, Inc., 52 USPQ2d 1294 (Fed. Cir. 1999) *quoting* In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Applying the above-quoted case law to the present situation, the Examiner is required to point to a suggestion or motivation in the art to combine the cited references in the manner suggested by the Examiner and to modify the combination in the manner suggested by the Examiner. While it is true that the evidence of a suggestion, teaching or motivation to combine prior art may flow from the prior art references themselves or the knowledge of one of ordinary skill in the art, that does not diminish the requirement that the Examiner must actually

point to such a suggestion or motivation. *See In re Anita Dembiczak, et al.*, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999). Applicant submits that the Examiner has not done such.

Claims 8 and 9 are dependent claims which are allowable because neither Newell nor Otsuka teach the use of constant pressure air application or the low pressure air application set forth in claim 9.

Claim 10 is a dependent claim which is allowable for the same reasons indicated above in connection with claims 3 and 15.

Claim 11 is an independent claim that is allowable because the proposed combination of Newell and Otsuka, even if permissible, fails to teach a damper that operates in the manner set forth in claim 11. Further, claim 11 sets forth multiple terminal units each having a damper, with the multiple dampers initiated in their duty cycles at different times. As indicated previously in connection with claim 5, this staggered arrangement of the timing of the duty cycles of multiple units is not taught by Newell and the Examiner has not indicated where it is taught by Otsuka.

Claim 12 is a dependent claim which is allowable for the same reasons set forth previously in connection with claims 3 and 15.

Claim 13 is allowable over proposed combination of Newell and Otsuka, even if permissible, for a variety of reasons, including the same reasons set forth above in connection with claim 11. Claim 13 calls for multiple terminal units with multiple dampers, and such an arrangement is not found or suggested in Newell or Otsuka. A variety of additional components set forth in claim 13 are not found in Newell or Otsuka, including the supply and return plenums and the return register, and the arrangement and locations of the various components.

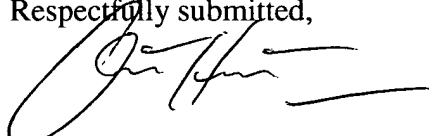
Applicant: Stanley Demster
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Claim 14 is allowable on its own merits for the reasons set forth in connection with claims 3 and 15.

In summary, the rejections of claims 1-17 are improper and, even if proper, it is respectfully submitted that all claims now presented for the consideration of the Examiner are allowable over the teachings of Newell in combination with Papazian or Otsuka. Consequently, this application is believed to be in full condition for allowance, and a formal notice to that effect is requested in due course. If the Examiner believes that a telephone conference will in any way expedite the handling of this application, he is invited to call the number listed below at his convenience.

The Commissioner is hereby authorized to charge any additional fees that are required, or credit any overpayment to Deposit Account No. 19-2112.

Respectfully submitted,



Clinton G. Newton
Reg. No. 42,930

CGN/tjd
SHOOK, HARDY & BACON L.L.P.
2555 Grand Blvd.
Kansas City, Missouri 64108-2613
816/474-6550

Encl.